

Notice of Allowability

Application No.

10/517,716

Applicant(s)

ISMAILI ET AL.

Examiner

Peter G. O'Sullivan

Art Unit

1621

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☐ This communication is responsive to _____.
2. ☒ The allowed claim(s) is/are 16-25 and 31-48.
3. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☒ All b) ☐ Some* c) ☐ None of the:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
 5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☒ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☒ Information Disclosure Statements (PTO/SB/08),
Paper No./Mail Date See Continuation Sheet
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application
6. ☐ Interview Summary (PTO-413),
Paper No./Mail Date _____.
7. ☒ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____.


PETER O'SULLIVAN
PRIMARY EXAMINER
GROUP 1200

Continuation of Attachment(s) 3. Information Disclosure Statements (PTO/SB/08), Paper No./Mail Date: 4/25/05, 4/1/05 and 3/25/05.

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Restriction is required under 35 U.S.C. 121 and 372.

This application contains the following inventions or groups of inventions which are not so linked as to form a single general inventive concept under PCT Rule 13.1.

In accordance with 37 CFR 1.499, applicant is required, in reply to this action, to elect a single invention to which the claims must be restricted.

Group I, claim(s) 16-25 and 30, drawn to processes of producing triaminobenzene and in some dependent claims, phloroglucinol.

Group II, claim(s) 26- 28, drawn to phloroglucinol compositions.

Group III, claim(s) 29, drawn to a method of treating cancer.

The inventions listed as Groups I-III do not relate to a single general inventive concept under PCT Rule 13.1 because, under PCT Rule 13.2, they lack the same or corresponding special technical features for the following reasons: applicants' generic claim 16 is drawn to a process for producing triaminobenzene which is structurally disparate from phloroglucinol and so lacks a corresponding special technical feature. Groups II and III are distinct inasmuch as phloroglucinol may be in a way other than to treat cancer such as when used as intermediates for dyes.

During a telephone conversation with Mr. Read on or about 28 December 2006 a provisional election was made with traverse to prosecute the invention of group I, claims 16-25 and 30. Affirmation of this election must be made by applicant in replying to this Office action. Claims 26-29 withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

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Authorization for this examiner's amendment was given in a telephone interview with Mr. Read on 28 December 2006 who also authorized any additional fees to be charged to deposit account number 13-2855.

1. Claims 26-30 were deleted.
2. In claim 17, lines 2 and 3 thereof, ", preferably a chlorine atom or NH₂ group and more preferably by a chlorine atom" was deleted.
3. In claim 18, line 2 thereof, ", preferably a chlorine atom" was deleted.
4. In claim 19, lines 2 and 3 thereof, "; said catalyst preferably being copper iodide" was deleted.
5. In claim 20, line 2 thereof, ", preferably 28%" was deleted.
6. In claim 21, line 4 thereof, "and preferably from 100 to 120°C," was deleted.
7. In claim 21, lines 8 and 9 thereof, ", in particular with ethylbenzoate, ethyl acetate, isopropyl acetate or n-butyl acetate" was deleted.
8. In claim 22, line 3 thereof, "in the presence of hydrochloric acid or of sulfuric acid was deleted.
9. In claim 22, line 4 thereof, "and preferably from 100 to 120°C," was deleted.
10. In claim 22, line 5 thereof, "step b) of " was deleted and -- the -- inserted in lieu thereof.
11. In claim 22, line 6 thereof, "preferably at a concentration of 37%," was deleted.
12. In claim 22, lines 10 and 11 thereof, ", in particular with ethyl benzoate, ethyl acetate, isopropyl acetate or n-butyl acetate" was deleted.

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13. In claim 23, line 3 thereof, "in the presence of hydrochloric acid or of sulfuric acid was deleted.

14. In claim 23, line 4 thereof, "and preferably from 100 to 120°C," was deleted.

15. In claim 23, line 5 thereof, "step b) of " was deleted and -- the -- inserted in lieu thereof.

16. In claim 23, line 6 thereof, "preferably from 50% V to 98% V," was deleted.

17. In claim 23, lines 10 and 11 thereof, ", in particular with ethyl benzoate, ethyl acetate, isopropyl acetate or n-butyl acetate" was deleted.

19. In claim 24, line 4 thereof, "and preferably from 100 to 120°C," was deleted.

22. In claim 24, lines 9 and 10 thereof, "in particular with ethyl benzoate, ethyl acetate, isopropyl acetate or n-butyl acetate," was deleted.

23. In claim 25, line 4 thereof, "and preferably from 100 to 120°C," was deleted.

24. In claim 25, lines 9 and 10 thereof, "in particular with ethyl benzoate, ethyl acetate, isopropyl acetate or n-butyl acetate," was deleted.

25. The following claims were added: --

31. The method of claim 16 further comprising the step of using the 1,3,5-triaminobenzene to produce phloroglucinol.

32. The method of claim 17 wherein A represents a chlorine atom or a NH₂ group.

33. The method of claim 32 wherein A represents a chlorine atom.

34. The method of claim 18 wherein X_1 and X_2 are identical and each represent a chlorine atom.

35. The method of claim 19 wherein said catalyst is copper iodide.

36. The method of claim 20 wherein the aqueous ammonia possesses a concentration of 28%.

37. The method of claim 21 wherein the hydrolysis of the 1,3,5-triaminobenzene in step b) is at a temperature of from 100 to 120°C.

38. The method of claim 21 wherein the extraction of phloroglucinol from the hydrolysate obtained in step b) or from the filtrate obtained in step c) uses ethyl benzoate, ethyl acetate, isopropyl acetate or n-butyl acetate.

39. The method of claim 22 wherein the hydrolysis of the 1,3,5-triaminobenzene in step b) is at a temperature of from 100 to 120°C.

40. The method of claim 22 wherein the hydrolysis is conducted in the presence of hydrochloric acid at a concentration of 37%.

41. The method of claim 22 wherein the extraction of phloroglucinol from the hydrolysate obtained in step b) or from the filtrate obtained in step c) uses ethyl benzoate, ethyl acetate, isopropyl acetate or n-butyl acetate.

42. The method of claim 23 wherein the hydrolysis of the 1,3,5-triaminobenzene in step b) is at a temperature of from 100 to 120°C.

43. The method of claim 23 wherein the hydrolysis of the 1,3,5-triaminobenzene is conducted in the presence of sulfuric acid at the concentration of from 50% V to 98% V.

44. The method of claim 23 wherein the extraction of phloroglucinol from the hydrolysate obtained in step b) or from the filtrate obtained in step c) uses ethyl benzoate, ethyl acetate, isopropyl acetate or n-butyl acetate.

45. The method of claim 24 wherein the hydrolysis of the 1,3,5-triaminobenzene in step b) is at a temperature of from 100 to 120°C.

46. The method of claim 24 wherein the extraction of phloroglucinol from the hydrolysate obtained in step b) or from the filtrate obtained in step c) uses ethyl benzoate, ethyl acetate, isopropyl acetate or n-butyl acetate.

47. The method of claim 25 wherein the hydrolysis of the 1,3,5-triaminobenzene in step b) is at a temperature of from 100 to 120°C.

48. The method of claim 25 wherein the extraction of phloroglucinol from the hydrolysate obtained in step b) or from the filtrate obtained in step c) uses ethyl benzoate, ethyl acetate, isopropyl acetate or n-butyl acetate.

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The following is an examiner's statement of reasons for allowance: The instant application is held to be allowable inasmuch as the prior art doesn't teach or suggest applicants' process for preparing 1,3,5-triaminobenzene and thus, ultimately, phloroglucinol, from compounds of applicants' formula I. The prior art actually teaches

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away from such a process: Nishiyama et al., U.S. 4,380,670, disclose direct production of 1,3,5-triaminobenzene from sym-trihalogenobenzene is not performed and that a prior art attempt at producing 1,3,5-triaminobenzene from 1,3,5-trichlorobenzene failed. Kobayahi et al., U.S. 5,510,533, and Baldoni et al., U.S. 3,230,266, are cited as state of the art only.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Any inquiry concerning this communication should be directed to Peter G. O'Sullivan at telephone number (571)272-0642.



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